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THAI, HANH B				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/510,045

Applicant(s)

PNG ET AL.

Examiner

HANH B. THAI

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20, 22, 26-31, 37-42, 45 and 48-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20, 22, 26-31, 37-42, 45 and 48-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is Non-Final Office Action in response to amendment filed on September 12, 2008. Independent claims 1, 31 and 42 have been amended. Claims 21, 23-25, 32-36, 43-44 and 46-47 have been cancelled. Claims 1-20, 22, 26-31, 37-42, 45 and 48-52 are pending in this application.

Response to Arguments

1. Applicant's arguments regarding "a knowledge manager having one or more of the following metadata applications: a data model manager, a dictionary manager, a knowledge entity manager, a data mapper, and a change manager; and a metadata repository comprising: a knowledge portion, a knowledge entity portion, a data mapping portion, a data dictionary portion and a change management portion" (response 9/12/08, pages 12-13) have been fully considered but they are not persuasive.

Sarbaz clearly discloses a data model (§[0023], Sarbaz discloses a data model configurator used to add, delete and/or modify the semantics of the data for the common data model), a data dictionary (§[0029], e.g. the property definition of the data), a knowledge entity (§[0020] and [0022], Sarbaz discloses knowledge 125 layers that is performed by an application server 205), a data mapper (§[0024]; [0026] and [0028], Sarbaz discloses mapping different data sources into common data), and a change manager (§[0026] and [0029]), and a metadata repository (§[0026] and [0028], e.g. "metadata tables relate the input data elements from the different data sources" corresponding to the claimed "metadata repository").

Examiner maintains that Sarbaz reference still teaches the claimed invention.

Claim Rejections - 35 USC § 112

2. Claims 1-20, 22 and 26-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In particular, the claimed limitation of "computing apparatus" is not defined in the specification.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-20, 22, 26-31, 37-42, 45 and 48-52 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claim 1, the claim recites a computing apparatus. However, the specification does not defined the claimed "computing apparatus". Therefore, examiner assumes it is solely software. Since the claim limitations appear to be directed to programmed functionality and not the components of an apparatus themselves, the claim stands rejected under 35 U.S.C. 101.

In order to overcome this rejection, the Applicant must amend claim 1 such that there is some recitation of computer hardware which would then ensure that claim 1 is limited to an apparatus consisting of software and hardware as opposed to just simply software. Doing so ensures that the claimed invention is strictly limited to a physical article or object, and therefore satisfy the requirements of 35 U.S.C. 101.

The basis of this rejection is set forth in a two-prong test of:

Art Unit: 2163

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological art. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological art fail to promote the “progress of science and the useful arts” (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a method claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) or mere implication of employing a machine or article of manufacture to perform some of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In *Bowman* (Ex parte *Bowman*, 61 USPQ2d 1665, 1671 (BD. Pat. App. & Inter. 2001) (Unpublished), the board affirmed the rejection under U.S.C. 101 as being directed to non-statutory subject matter. Although *Bowman* discloses transforming physical media into a chart and physically plotting a point on said chart, the Board held that the claimed invention is nothing more than an abstract idea, which is not tied to any technological art or environment.

In this case, the claims 31 and 42 both recite an abstract idea. Although the preamble recites a metadata database coupled to at least one information database and configured to receive information and a knowledge manager for a metadata database management system of at least one information database, the claimed steps do not seem to require any computing hardware and can be implemented by the mind of a person or by the use of a pencil and paper. In other words, since the claimed invention, as a whole, is not within the technological arts as explained above, these claims only constitute an idea and does not apply, involve, use, or advance the technological arts, thus, it is deemed to be directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Reed et al. (US 6,345,288 B1).

Regarding claims 1 and 31, Reed discloses a metadata database management system for at least one database (e.g. database “11” or database “21”, Fig.1), wherein the at least one database is coupled to receive information from at least one information source coupled to provide information to at least one information consumer (col.9, lines 2-29), the metadata database management system (Fig.1) comprising:

a metadata database (e.g. database “11”, Fig.1) for storing metadata associated with data stored in the at least one database (col.8, line 65 to col. 9, line 12, Reed discloses “metadata provider database” corresponding to “metadata database”), for storing metadata associated with the at least one information source, and for storing metadata associated with the at least one information consumer (col. 14, lines 21-38); and

a knowledge manager (Fig.1; Fig. 17; col.36, lines 21-32 and col.136, lines 44 to col. 137, line14, Reed discloses “communication object 35” corresponding to “a knowledge manager”) coupled to the metadata database, the knowledge manager comprising at least one metadata application for managing a plurality of knowledge aspects of the at least one database, the at least one metadata application for accessing at least some of the metadata stored in the metadata database, and the at least one metadata application for using the at least some of the metadata to manage at least one of the plurality of knowledge aspects of the at least one database

(col.36, lines 21-32 and col.136, lines 44 to col. 137, line14, Reed discloses “communication object”, specifically “schedule objects 110” is used for managing group schedules in multi-user database).

5. Claims 1-15, 18, 20-25, 27-36, 39, 41-47 and 49-52 are rejected under 35 U.S.C. 102(c) as being anticipated by Sarbaz et al. (US 2003/0074358 A1).

Regarding claim 1, Sarbaz discloses a metadata database management system for at least one database (e.g. database “103”, Fig.1), wherein the at least one database is coupled to receive information from at least one information source (e.g. “data sources 101”, Fig.1) coupled to provide information to at least one information consumer (e.g. “user 105”, Fig.1), the metadata database management system comprising:

a metadata database (e.g. database “103”, Fig.1) for storing metadata associated with data stored in the at least one database (e.g. storage of data “117”, Fig.1), for storing metadata associated with the at least one information source (e.g. “data sources 101”, Fig.1), and for storing metadata associated with the at least one information consumer (Fig.1 and ¶ [0016]); and

a knowledge manager (“knowledge 125” corresponding to “a knowledge manager”) coupled to the metadata database, the knowledge manager comprising at least one metadata application for managing a plurality of knowledge aspects of the at least one database (¶ [0027] and [0029]), the at least one metadata application for accessing at least some of the metadata stored in the metadata database ([0027]), and the at least one metadata application for using the at least some of the metadata to manage at least one of the plurality of knowledge aspects of the at least one database (Figs. 1-3 and ¶[0016]-[0020]; ¶[0022] and [0027]).

Regarding claim 2, Sarbaz further discloses that the metadata database management system is being adapted for dynamically coupling to the at least one database (e.g. “database 107”, Fig.2).

Regarding claim 3, Sarbaz discloses that the metadata database management system is being adapted for dynamically coupling to the plurality of information sources (information source “111”, Fig.2).

Regarding claim 4, Sarbaz discloses that the metadata database management system is further being adapted for dynamically coupling to the plurality of information consumers (e.g. “user applications 207”).

Regarding claim 5, Sarbaz discloses wherein the at least one information source comprises at least another database, the metadata database management system for coupling to the at least another database, and the metadata database for storing metadata associated with the at least another database (e.g. “multiDimen-DB 311”, Fig, 4).

Regarding claim 6, Sarbaz discloses wherein the at least another database has at least another one information source coupled thereto, the metadata database management system for coupling to the at least another one information source, and the metadata database for storing metadata associated with the at least another one information source (e.g. different data sources 111, Fig.4).

Regarding claim 7, Sarbaz discloses wherein the at least another database has at least another one information consumer coupled thereto, the metadata database management system for coupling to the at least another one information consumer, and the metadata database for

storing metadata associated with the at least another one information consumer (¶ [0003] and [0016]-[0020]).

Regarding claim 8, Sarbaz discloses wherein the at least one information consumer comprises at least one other database, the metadata database management system for coupling to the at least one other database, and the metadata database for storing metadata associated with the at least one other database (Figs. 1-3 and ¶ [0016]-[0020]).

Regarding claim 9, Sarbaz discloses wherein the at least one other database is coupled to at least one other information source, the metadata database management system for coupling to the at least one other information source, and the metadata database for storing metadata associated with the at least one other information source (Figs. 1-3 and ¶ [0016]-[0020]).

Regarding claim 10, Sarbaz discloses wherein the at least one other database is coupled to at least one other information consumer, the metadata database management system for coupling to the at least one other information consumer, and the metadata database for storing metadata associated with the at least one other information consumer (Figs. 1-3 and ¶ [0016]-[0020]).

Regarding claims 11, 32, Sarbaz discloses wherein the at least some of the metadata stored in the metadata database constitute a knowledge portion of the metadata database, and wherein the at least some of the metadata comprises at least one knowledge metadata (e.g. “metadata 1” and “metadata 2”, Fig.4).

Regarding claims 12, 33, Sarbaz discloses wherein the at least some of the metadata stored in the metadata database constitute a knowledge entity portion of the metadata database,

and wherein the at least some of the metadata comprises at least one knowledge entity metadata (e.g. “metadata tables 427” and ¶ [0027]).

Regarding claims 13, 24, 34, Sarbaz discloses wherein the at least some of the metadata stored in the metadata database constitute a data mapping portion of the metadata database, and wherein the at least some of the metadata comprises at least one data mapping metadata (¶ [0027]).

Regarding claims 14, 35, Sarbaz discloses wherein the at least some of the metadata stored in the metadata database constitute a data dictionary portion of the metadata database, and wherein the at least some of the metadata comprises at least one data dictionary metadata (¶ [0024]-[0029], data models in metadata database corresponding to “data dictionary metadata”).

Regarding claims 15, 25, 36 Sarbaz discloses wherein the at least some of the metadata stored in the metadata database constitute a change management portion of the metadata database, and wherein the at least some of the metadata comprises at least one change management metadata (¶ [0026] and [0029]-[0030]).

Regarding claims 18, 27-28 and 39, Sarbaz discloses wherein the at least some of the metadata stored in the metadata database constitute a reference and standards portion of the metadata database, and wherein the at least some of the metadata comprises at least one reference and standards metadata (¶ [0016]-[0020]; ¶ [0022] and [0027]).

Regarding claims 20 and 41, Sarbaz discloses wherein the at least some of the metadata stored in the metadata database constitute a document resources portion of the metadata database, and wherein the at least some of the metadata comprises at least one document resources metadata (¶ [0016]; [0020] and [0052]).

Regarding claim 21, Sarbaz discloses wherein the at least one metadata application comprises a data model manager for using the at least some of the metadata to manage at least one data model of the at least one database (§ [0016]-[0020]; ¶ [0022] and [0027]).

Regarding claim 22, Sarbaz discloses wherein the at least one metadata application comprises a data dictionary manager for using the at least some of the metadata to manage at least one data dictionary of the at least one database (§ [0024]-[0029]).

Regarding claim 23, Sarbaz discloses wherein the at least one metadata application comprises a knowledge entity manager for using the at least some of the metadata to manage at least one knowledge entity of the at least one database (§ [0016]-[0020]; ¶ [0024] and [0029]).

Regarding claim 29, Sarbaz discloses wherein the at least one metadata application comprises a performance manager for using the at least some of the metadata to manage at least one performance aspect of the at least one database (Figs. 1-3 and ¶ [0016]-[0020]).

Regarding claim 30, Sarbaz discloses wherein the at least one metadata application comprises a graphical user interface for using the at least some of the metadata to manage at least one graphical user interface aspect of the at least one database (§ [0040]).

Regarding claim 31, , Sarbaz discloses a metadata database for a metadata database management system of at least one database, wherein the at least one database is coupled to receive information from at least one information source and coupled to provide information to at least one information consumer, the metadata database comprising:

a metadata repository (e.g. database “103”, Fig.1) for storing metadata associated with data stored in the at least one database (e.g. storage of data “117”, Fig.1), for storing metadata associated with the at least one information source (e.g. “data sources 101”, Fig.1), and for

storing metadata associated with the at least one information consumer (Fig.1 and ¶ [0016]-[0020]).

Regarding claim 42, Sarbaz discloses a knowledge manager (“knowledge 125” corresponding to “a knowledge manager”) for a metadata database management system of at least one database, wherein the at least one database is coupled to receive information from at least one information source (e.g. “data sources 101”, Fig.1) and coupled to provide information to at least one information consumer (e.g. “user 105”, Fig.1), the knowledge manager comprising:

at least one metadata application (e.g. database “103”, Fig.1) for coupling to a metadata database, the at least one metadata application for managing a plurality of knowledge aspects of the at least one database (¶[0027] and [0029]), the at least one metadata application for accessing at least some of the metadata stored in the metadata database (¶[0016]-[0020] and [0027]), and the at least one metadata application for using the at least some of the metadata to manage at least one of the plurality of knowledge aspects of the at least one database (Figs. 1-3 and ¶[0016]-[0020]; ¶[0022] and [0027]).

Regarding claims 43-52, these claims are rejected on ground corresponding to the argument given above for rejected claims 1-15, 18, 20-25, 27-36, 39 and are similarly rejected.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 16-17, 26, 37-38, 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarbaz et al. (US 2003/0074358 A1) in view of Myrick et al. (US 7162427 B1).

Regarding claims 16, 26, 37 and 48, Sarbaz discloses all of the claimed limitations as discussed above, except wherein the at least some of the metadata stored in the metadata database constitute a business rules portion of the metadata database and business event metadata. Myrick discloses a collaborated business management system including business rule and business event metadata (Fig.2 and Fig.14A-B and corresponding text). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Sarbaz to include the claimed features as taught by Myrick. The motivation of doing so would have been to provide a common model for articulating the mandatory components of enterprise architecture and the baseline for developing information technology planning and integration approaches (col.2, lines 8-12, Myrick).

Regarding claims 17 and 38, Sarbaz/Myrick combination discloses wherein the at least some of the metadata stored in the metadata database constitute a business event portion of the metadata database, and wherein the at least some of the metadata comprises at least one business event metadata (Fig.2 and Fig.14A-B).

7. Claims 19 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarbaz et al. (US 2003/0074358 A1) in view of Bergman et al. (US 6,564,263 B1).

Regarding claims 19 and 40, Sarbaz discloses all of the claimed limitations as discussed above, except wherein the at least some of the metadata comprises at least one multiple language metadata. Bergman discloses a multimedia content framework for aggregating multimedia

objects including multiple languages (col.6, lines 39-56, Bergman). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Sarbaz to include the claimed feature as taught by Bergman. The motivation of doing so would have been to provide a specialized computer system with flexibility of management and communication.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HANH B. THAI whose telephone number is (571)272-4029. The examiner can normally be reached on Mon-Thur (7:00AM - 4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung T Vy/
Primary Examiner, Art Unit 2163

Hanh B Thai
Examiner
Art Unit 2163

November 23, 2008

